## INTERNATIONAL SEARCH REPORT

ational Application No

PCT/US2004/004702

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 H04L27/00 H04L27/34 H04B7/185

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  $IPC \ 7 \quad H04L \quad H04B$ 

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC, COMPENDEX, IBM-TDB

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 02/089371 A (HUGHES ELECTRONICS CORP) 7 November 2002 (2002-11-07) page 5, paragraph 3 page 8, paragraph 2 - paragraph 4; figure 4B	1-35
Υ	WO 03/101034 A (MATSUMOTO WATARU ; MITSUBISHI ELECTRIC CORP (JP)) 4 December 2003 (2003-12-04) abstract; figure 1	1-35
Y	US 2003/123595 A1 (GOLSHAN ALI R ET AL) 3 July 2003 (2003-07-03) paragraph '0044!; figure 3	1–35
Υ .	EP 1 313 279 A (CIT ALCATEL) 21 May 2003 (2003-05-21) paragraph '0020! - paragraph '0033!	1-35

X Further documents are listed in the continuation of box C.	Patent family members are listed in annex.
Special categories of cited documents:  A document defining the general state of the art which is not considered to be of particular relevance  E earlier document but published on or after the international filling date  L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  O document referring to an oral disclosure, use, exhibition or other means  P document published prior to the international filling date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention  "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone  "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.  "&" document member of the same patent family
Date of the actual completion of the international search	Date of mailing of the international search report
18 October 2004	22/10/2004
Name and malling address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Koukourlis, S

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